

a transparent polythene tube, about one centimetre in diameter and about 10 centimetres in length. The two ends of this tube open into the containers, through their walls. The length of this tube may be changed according to the habits of the ant-species concerned.

The above set-up is left for at least two to three weeks because it has been noticed that freshly cast Plaster of Paris has some kind of deleterious effect on the ants. Then, the nest is ready for use. The bent glass tube projecting outside is used for damping the plaster inside by passing small quantities of water through it at regular intervals. This maintains, inside the nest, a humid atmosphere which the ants require. The ant colony with the queen is introduced into the large container which serves as the nest proper or colony chamber. The smaller container is used as the feeding chamber in which food is kept. Under this arrangement, it is possible to maintain proper humidity conditions and to feed the ants without disturbing the ants in the colony chamber. It is also possible to observe the activities of the ants inside the colony chamber and also the foraging and feeding behaviour through the transparent lids of the containers and the connecting tube. The colony chamber should be covered with black cloth or some other opaque material as the ants seek darkness in their habitation in nature. Extra containers with a base of Plaster of Paris inside and with suitable ventilators may also be connected to the main colony chamber by means of polythene tubes so that the ants may, if they have the habit, use them for starting subsidiary nests.

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#### 17. A CASE OF INTERGENERIC COMPETITION AND REPLACEMENT IN THE ANTS, *OECOPHYLLA SMARAGDINA* FABRICIUS AND *ANOPOLEPIS LONGIPES* JERDON (HYMENOPTERA: FORMICIDAE)

When two genera of ants with somewhat common requirements meet in an area, the resulting competition generally involves considerable hostility but there are many ways of avoiding or reducing this con-

tingency where major individual differences in size and structure as well as social organization and feeding method can occur (Brian 1965). When such factors facilitating intergeneric co-existence do not operate, the interactions between the competing genera may be so violent that one of the genera may become predominant and finally replace the other. The various patterns of interactions in the ant fauna have been reported by Way (1953, 1954 a&b) and Vanderplank (1960). The following is the report of the interactions between two species of ants, *Oecophylla smaragdina* Fabricius and *Anoplolepis longipes* Jerdon in a square enclosed compound in Calicut.

*Oecophylla smaragdina* had, for many years been living in leaf-nests on the mango trees, with apparently well established territories in the compound and was found in large numbers. In the middle of 1966, *Anoplolepis longipes*, an immigrant ant species first appeared in the compound, nesting in bare soil. *A. longipes* is an active ant and its workers could be seen carrying away small insects and sometimes, the workers of *O. smaragdina*. The workers of *A. longipes* were also seen climbing the mango and other trees in large numbers, probably for predation. In 1967, *A. longipes* became conspicuous by its large numbers and a large number of its nests could be seen in the soil. The populations of *O. smaragdina* showed a gradual and steady decline. By 1968, *A. longipes* replaced *O. smaragdina* which completely disappeared from the compound.

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